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Please find below and/or attached an Office communication concerning this application or proceeding.

.

Office Action Summary

Application No. **09/348,515**

Applicant(s)

Murakami et al.

Examiner

M. irshadullah

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The MAILING DATE of this communication appears	on the cover sheet with the correspondence address
communication. - Failure to reply within the set or extended period for reply will, by - Any reply received by the Office later than three months after the earned patent term adjustment. See 37 CFR 1.704(b).	FR 1.136 (a). In no event, however, may a reply be timely filed ation.
Status 1) Responsive to communication(s) filed on Jul 7, 199	99
2a) ☐ This action is FINAL . 2b) ☒ This act	ion is non-final.
closed in accordance with the practice under Ex pa	except for formal matters, prosecution as to the merits is arte Quayle, 1935 C.D. 11; 453 O.G. 213.
Disposition of Claims	to form and after the short of
	is/are pending in the application.
	is/are withdrawn from consideration.
5) Claim(s)	is/are allowed.
6) 💢 Claim(s) <u>1-35</u>	is/are rejected.
7) Claim(s)	is/are objected to.
8) Claims	are subject to restriction and/or election requirement.
Application Papers	
9) \square The specification is objected to by the Examiner.	
10) The drawing(s) filed on is/are	objected to by the Examiner.
11) The proposed drawing correction filed on	is: a) □ approved b) □ disapproved.
12) \square The oath or declaration is objected to by the Exami	iner.
Priority under 35 U.S.C. § 119 13)□ Acknowledgement is made of a claim for foreign properties as a large state of the control	
1. Certified copies of the priority documents hav	
	re been received in Application No
 3. Copies of the certified copies of the priority deposition from the International Bure *See the attached detailed Office action for a list of the 	
14) 💢 Acknowledgement is made of a claim for domestic	priority under 35 U.S.C. § 119(e).
Attachment(s)	
15) Notice of References Cited (PTO-892)	18) Interview Summary (PTO-413) Paper No(s).
16) Notice of Dreftsperson's Patent Drawing Review (PTO-948)	19) Notice of Informal Patent Application (PTO-152)
17) X Information Disclosure Statement(s) (PTO-1449) Paper No(s). 5, 7	20) Other:

DETAILED ACTION

Specification

- 1. The disclosure is objected to because of the following informalities:
 - a) Page 5, line 17: "Throught" should be "Through";
- b) Page 6, line 20: the second highest (or Nth highest) SOC does not correspond with lines 24 and line 28 "highest or Nth highest SOC vehicle" and "the Nth highest SOC vehicle" respectively.

Appropriate corrections and elucidation are appreciably required for the benefit of the Patent Community.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1-35 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-35 of copending Application No. 09/349,423. Although the conflicting claims are not identical, they are not patentably distinct from each other, because:

Claim 1 elements are same as those of the application 09/349,423, except 1c. The element 1c of instant application recites: allocating a vehicle having "a highest level of charge" in the selected group as against the element 1c of 09/349,423, which reads: allocating a vehicle having "a second highest level of charge" in the selected group "if there are two or more vehicles in said group"

However, said features would have been obvious to one having ordinary skill in the relevant art at the time of invention, because it is a customary/common practice in the art to provide/select a vehicle firstly with the best charge (highest level of charge), and if for some reason it is not possible/allowable, then allocate/provide the next best charged (second highest level charge) vehicle.

Furthermore, it needs no mentioning th-at the word "group" undoubtedly indicates having at least one vehicle. If the group comprises only one vehicle, then there would be no choice. The one having whatever charge level will be considered as the vehicle with highest level of charge.

Similar reasoning hold in respect of claims 2, 9, 19 and 20 of this application as compared to claims 2, 9, 19 and 35 of the application number 09/349, 423.

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The dependent claims (except claim 35) of the instant application are same verbatim as those of 09/349,423, and are rejected in view of their dependencies from respective independent

This is a <u>provisional</u> obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

- 4. Claims 1-35 of this application conflict with claims 1-35 of Application No. 09/349,423, filed July 07, 1999. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.
- 5. Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending application(s). See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

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Claim Rejections - 35 USC § 103

- 6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 7. Claims 1-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tagami et al (US Patent 5,812,070) in view of Klein et al (US Patent 5,726,885).

Tagami et al show:

- Claim 1. A method for determining an order of allocating electric vehicles for use depending on different charge levels of the vehicles [Title, col 4, lines 14-16, col 6, lines 6-11], comprising the steps of:
- b) selecting a group of vehicles having charge levels which are adequate for covering said expected distance of an intended trip [Col 3, lines 13-21, col 5, lines 63-67 continue col 6, lines 1-2, col 8, lines 26-32. Applicant will appreciably realize that the reference recites "plurality of motor vehicles [Abstract, lines 1-2] " and shows selection of one vehicle, yet the same selection function would be used for selecting a group of vehicles from the plurality of vehicles. Also, applicant will appreciate that the reference recites selection based on " average distance traveled

in the past ", the system would be effectively used for vehicle selection covering the desired/expected journey/intended trip]; and

c) allocating a vehicle having a highest level of charge in the selected group [Col 6, lines 11-15];

Tagami et al do not explicitly show the following feature:

a) having a user enter an expected distance of an intended trip.

However, Klein et al teach the same [Col 1, lines 6-9,15-17, col 3, lines 1-2, 5-6, col 2, lines 61-62, col 4, lines 21-31 recited with lines 35-37].

It would have been obvious to one of ordinary skill in relevant art at the time of applicant's invention to incorporate Klein et al's feature into Tagami et al's invention, because it would save the user/renter from being stranded in-between and facing an untoward situation.

- Claim 2. A method for allocating one or more vehicles from a fleet of electric powered vehicles to one or more users, wherein each vehicle has a state of charge (SOC) at any given time, the method comprising:
- b) selecting a group of one or more vehicles from the fleet, where each selected vehicle has an SOC sufficient to meet the travel request from the user [Tagami et al: Col 3, lines 13-21, col 5, lines 63-67 continue col 6, lines 1-2, col 8, lines 26-32. Applicant will appreciably realize that the reference recites "plurality of motor vehicles [Abstract, lines 1-2] " and shows selection

of one vehicle, yet the same selection function would be used for selecting a group of vehicles from the plurality of vehicles]; and

c) allocating the vehicle having the highest SOC in the group for the user [Col 6, lines 11-15];

Tagami et al do not explicitly show the undernoted feature:

a) receiving a travel request from a user.

However, Tagami et al teach communication between the control center (MC) and user vehicle (C) [Fig. 1 (M, H and C to A at MC] using the on-board computer 21 of C [Col 4, lines 17-19 read with lines 30-33].

Official notice is taken that it would have been obvious to one of ordinary skill in the relevant art at the time of instant invention to advantageously employ/use the reference's communication system by the user to send a request/travel request and MC receiving the same.

Claims 3 and 10. A method as recited in claim 2/9, wherein said step of receiving a travel request comprises receiving information associated with an expected distance of travel and wherein said step of selecting a group comprises selecting one or more vehicles, each with a sufficient S OC to travel the expected distance [See discussion of applicant's claim 1a and 1b].

Claims 4 and 11. A method as recited in claim 2/9, wherein said step of receiving a travel request comprises receiving information associated with an expected time period of use and

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wherein said step of selecting a group comprises selecting one or more vehicles, each with a sufficient SOC to travel for the expected time period [Discussion of applicant's claim 1a above and Klein et al's col 1, lines 15-15, col 6, lines 8-12].

- Claim 6. A method as recited in claim 2, further comprising the step of identifying the allocated vehicle to the user [Klein et al: Col 3, lines 23-24, col 4, line 52 and col 5, line 41].
- Claim 7. A method as recited in claim 6, wherein said step of identifying the allocated vehicle to the user comprises displaying identification information to the user on a display device [Klein et al: Col 6, lines 1-8, col 4, lines 26-27, col 7, lines 6-7].

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Claim 8. A method as recited in claim 2, wherein said step of receiving a travel request comprises:

displaying a map to the user [Klein et al: Col 6, lines 7-8 and col 7, lines 17-22]; and receiving user-selected map locations corresponding to locations on the displayed map through a user-interface associated with the displayed map [Klein et al: Col 6, lines 1-3, col 7, lines 17-21 and claim 7].

- Claim 9. A method for allocating one or more vehicles from a fleet of electric powered vehicles to one or more users, wherein each vehicle has a state of charge (S OC) at any given time, the method comprising:
- a) providing a user-interface terminal at one or more ports [Tagami et al: Fig. (48), col 5, line 28 and col 4, lines 17-19. Applicant will appreciate that reference shows one parking port (MP), however, it is a common/customary practice in the vehicle renting business to have multitude of ports for the convenience of customers/renters under central control. Reference would, therefore, have one or more ports like MP];

In the following element, Tagami et al show

b) communicating the travel request information to a computer [Tagami et al: Fig. 1 (C in H or M to MC via A), yet

Tagami et al do not explicitly show the undernoted feature:

receiving a travel request from a user at a user interface.

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However, Tagami et al teach communication between the control center (MC) and user vehicle (C) [Fig. 1 (M, H and C to A at MC] using the on-board computer 21 of C [Col 4, lines 17-19 read with lines 30-33] or Fig. 4 (48), if user would be using facility having computer 60]. Official notice is taken that it would have been obvious to one of ordinary skill in the relevant art at the time of instant invention to advantageously employ/use the reference's communication system by the user to send a request/travel request and MC receiving the same at Fig. 4 (48 c), col 5, line 61].

- c) operating the computer to select a group of one or more vehicles from the fleet, where each selected vehicle has an S OC sufficient to meet the travel request information from the user [Tagami et al: Col 3, lines 13-21, col 5, lines 63-67 continue col 6, lines 1-2, col 8, lines 26-32. Applicant will appreciably realize that the reference recites "plurality of motor vehicles [Abstract, lines 1-2] " and shows selection of one vehicle, yet the same selection function would be used for selecting a group of vehicles from the plurality of vehicles]; and
- d) operating the computer to allocate the vehicle in the group having the highest SOC for the user [Col 6, lines 11-15].
- Claim 13. A method as recited in claim 9, further comprising the step of displaying vehicle identification information on a display device at me port facility from which travel

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information is received, identifying the vehicle allocated to the user [See discussion of applicant's claims 6 and 7 above].

Claim 14. A method as recited in claim 9, wherein:

a) said step of providing a user-interface terminal at one or more ports comprises providing a user-interface at a plurality of ports disposed at geographically remote locations relative teach other [Tagami et al: Fig. (48), col 5, line 28 and col 4, lines 17-19. Applicant will appreciate that reference shows one parking port (MP), however, it is a common/customary practice in the vehicle renting business to have multitude of ports for the convenience of customers/renters under central control. Reference would, therefore, have one or more ports like MP and Klein et al: Fig. 2, col 6, lines 46-53, col 7, lines 1-10, col 8, lines 1-8];

b) each port has a vehicle search group (VSG)in which more than one and less than all of the vehicle from the fleet may be located at any given time [Tagami et al: Abstract, lines 1-3, col 2, lines 24-33 (specifically lines 25-26 and 30-31). Applicant will appreciably realize that in computer art same function/program etc is user for various purposes, and reference's dividing/grouping means would be advantageously used to grouping/dividing the plurality of vehicles into groups according to some defined criteria including travel information received]; and

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c) said step of operating the computer to select a group of one or more vehicles from the fleet comprises selecting a group from the VSG of the port from which travel information is received [Discussion of the 14b and col 2, lines 60-61].

Claim 15. A method as recited in claim 14, wherein the V S G of any given port includes vehicles parked at a parking facility at the port [Tagami et al: Col 5, lines 20-21 and Figs. 4 and 5].

Claim 16. A method as recited in claim 15, wherein the V S G of any given port further includes vehicles due to arrive at the port within a preset time period [Tagami et al: Col 5, line 22, col 6, lines 50-53. Applicant will appreciate that in vehicle renting business return of vehicles at a fixed/preset time is a common practice].

Claim 17. A method as recited in claim 16, wherein the V S G of any given port further includes vehicles due to become sufficiently charged at the port within a preset time period [Tagami et al: Col 5, lines 25-27].

Claim 18. A method as recited in claim 15, wherein the V S G of any given port further includes vehicles due to become sufficiently charged at the port within a preset time period [Tagami et al: Col 5, lines 25-27, col 6, line 58, col 7, lines 9-13. Applicant will appreciate that

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computer 60's determining function would be used to find as to which vehicle(s) would be due to become sufficiently charged].

Claim 19. A method for allocating one or more vehicles from a fleet of electric powered vehicles to one or more users, wherein each vehicle has a state of charge (S OC) at any given time and the rate at which any given vehicle within can be charged is dependent upon the SOC of the vehicle wherein a plot of the S O C of the vehicle being charged versus time defines a generally linear region at lower S O C levels and a nonlinear region at higher S OC levels, the method comprising:

- b) selecting a group of one or more vehicles from the fleet, where each selected vehicle has a SOC sufficient to meet the travel request from the user [Tagami et al: Col 3, lines 13-21, col 5, lines 63-67 continue col 6, lines 1-2, col 8, lines 26-32. Applicant will appreciably realize that the reference recites "plurality of motor vehicles [Abstract, lines 1-2] " and shows selection of one vehicle, yet the same selection function would be used for selecting a group of vehicles from the plurality of vehicles]; and
- c) allocating any vehicle within the group having an S OC within the nonlinear region and, if no vehicles within the group have an SOC within the nonlinear region, then allocating the vehicle within the group having the highest SOC for the user [Col 6, lines 11-15];

 Tagami et al do not explicitly show the undernoted feature:
 - a) receiving a travel request from a user.

However, Tagami et al teach communication between the control center (MC) and user vehicle (C) [Fig. 1 (M, H and C to A at MC] using the on-board computer 21 of C [Col 4, lines 17-19 read with lines 30-33].

Official notice is taken that it would have been obvious to one of ordinary skill in the relevant art at the time of instant invention to advantageously employ/use the reference's communication system by the user to send a request/travel request and MC receiving the same.

- Claim 2 0. A vehicle allocation system for allocating one or more vehicles from a fleet of electric powered vehicles to one or more users, wherein each vehicle has a state of charge (S OC) at any given time, the vehicle allocation system comprising:
- a) one or more ports at geographically remote locations relative to each other, each port having a user-interface terminal for receiving a travel request from a user [Tagami et al: Fig. (48), col 5, line 28 and col 4, lines 17-19. Applicant will appreciate that reference shows one parking port (MP), however, it is a common/customary practice in the vehicle renting business to have multitude of ports for the convenience of customers/renters under central control. Reference would, therefore, have one or more ports like MP and Klein et al: Fig. 2, col 6, lines 46-53, col 7, lines 1-10, col 8, lines 1-8];
- b) a computer system coupled in communication with at least one user-interface terminal and programmed to respond to a travel request received from a user, for selecting a group of one or more vehicles from the fleet, where each selected vehicle has an SOC sufficient to meet the

travel request from the user, said computer system being further programmed to allocate the vehicle having the highest S O C in the group for the user [Tagami et al: Col 3, lines 13-21, col 5, lines 63-67 continue col 6, lines 1-2, col 8, lines 26-32. Applicant will appreciably realize that the reference recites "plurality of motor vehicles [Abstract, lines 1-2] " and shows selection of one vehicle, yet the same selection function would be used for selecting a group of vehicles from the plurality of vehicles; and Col 6, lines 11-15].

Claim 21. A system as recited in claim 2 0, wherein said computer system comprises a central station computer system coupled in communication with a plurality of user-interface terminals at a plurality of said ports [Tagami et al: Fig. 1 (MC and MP), col 4, lines 8-11.

Applicant will appreciate that reference shows one parking port (MP), however, having multiple ports at various locations is a common/customary practice in vehicle renting business].

Claim 22. A system as recited in claim 20, wherein said travel request comprises information associated with an expected distance of travel and wherein said group comprises one or more vehicles, each with a sufficient SOC to travel the expected distance [See the discussion of applicant's's claim 2b above].

Claim 23. A system as recited in claim 2 0, wherein said travel request comprises information associated with an expected time period of use and wherein said group comprises one

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or more vehicles, each with a sufficient S O C to travel for the expected time period [Discussion of applicant's claim 2b and col 5, lines 9-11].

Claim 24. A system as recited in claim 2 0, wherein said travel request comprises information associated with an expected destination port and an expected distance of travel beyond a direct route to the destination port and wherein said group comprises one or more vehicles, each with a sufficient S OC to travel the combined distance of the direct route to the destination port and expected distance of travel beyond the direct route [Klein et al: Col 3, lines 1-10, 37, col 4, lines 35-37 and Tagami et al: col 5, lines 53-55 and 63-67 continue col 6, lines 1-2].

Claim 25. A system as recited in claim 2 0, wherein each port is provided with a display device for displaying identification information, identifying an allocated vehicle to a user [See the discussion of applicant's Claim 6 above].

Claim 26. A system as recited in claim 20, wherein each of user-interface terminals comprises a display device for displaying a map to the user and an user/display interface for receiving user-selected map locations corresponding to locations on the displayed map from a user [See the discussion of applicant's claim 8 above].

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Claim 27. A system as recited in claim 21, wherein:

a) each port has a vehicle search group (VSG)in which more than one and less than all of the vehicles from the fleet may be located at any given time [See the discussion of applicants claim 14a above]; and

said computer is programmed to select a group of one or more vehicles by selecting a group from the VSG of the port from which travel information is received [See the discussion of applicant's claim 14 b].

Claim 28. A system as recited in claim 27, wherein each port includes a vehicle parking facility at which one or more vehicles may be parked at any given time and the VSG of a given port includes vehicles parked at a parking facility at the port [See the discussion of applicant's claim 15].

Claim 29. A system as recited in claim 2 8, wherein each port includes at least one vehicle charging facility and the V S G of a given port further includes vehicles due to become sufficiently charged at the port within a preset time period [See the discussion of applicant's claim 16].

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Claim 3 0. A system as recited in claim 28, wherein the VSG of a given port further includes vehicle due to arrive at the port within a preset time period [See the discussion of applicant's claim 17].

Claim 31. A system as recited in claim 3 0, wherein each port includes at least one vehicle charging facility and the VSG of a given port further includes vehicles due to become sufficiently charged at the port within a preset time period [See the discussion of applicant's claim 18].

Claim 3 2. A system as recited in claim 20, further comprising a plurality of vehicle subsystems associated on a one-to-one basis with the vehicles from the fleet, each vehicle subsystem including means for detecting the SOC of its associated vehicle and for transmitting information corresponding to the detected SOC to the computer system [Tagami et al: Col 4, lines 17-19 and Fig. 1 (C at H or M to MC via A].

Claim 33. A system as recited in claim 20, wherein the request includes user identification information and wherein said computer system is programmed to further base the vehicle selection on the user identification information [Tagami et al: Col 5, lines 40-58] in conjunction with col 2, lines 61-62, col 3, lines 1-10].

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Claim 34. A system as recited in claim 3 3, wherein said computer system includes a storage of vehicle preference information associated with each user identification and is programmed to retrieve from storage vehicle preference information associated with user identification information received from a port terminal and to further base the vehicle selection on the vehicle preference information [Tagami et al: Col 5, lines 40-58 in conjunction with col 2, lines 61-62, col 3, lines 1-10].

Claim 35. A system as recited in claim 3 4, wherein the vehicle preference information comprises information from the group consisting of: number of vehicle wheels,-number of vehicle doors, preferred minimal S O C or range of S OC s, distance usually traveled, and usual duration of vehicle use [Inherent, since the claimed features are notoriously known and practiced in vehicle hiring/renting art].

Conclusion

- 8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
 - A) Nakai et al., US Patent 5,686,895. Display Unit For Automobiles.
- B) Kayano et al., US Patent 5,614,804. Method Of Detecting Residual Capacity Of Battery For Use On Electric Vehicle.

C) Ishiguro et al., US Patent 5,612,608. Apparatus For Displaying Residual Capacity Of Battery For Use On Electric Vehicle.

D) Hirshberg, US Patent 5,289,369. Car Rent System.

E) Asthana et al., US Patent 5,265,006. Demand Scheduled Partial Carrier Load Planning System For The Transportation Industry.

F) Behnke, US Patent 4,360,875. Automated, Door-To-Door, Demand-Responsive Public Transportation System.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Irshadullah whose telephone number is (703) 308-6683. The examiner can normally be reached on M-F from 11:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz, can be reached on (703) 305-9643. The fax numbers for the organization are (703) 305-0040/308-6306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-3900.

M. Irshadullah

November 29, 2001

SUPERVISORY PATENT EXAMINÉR

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